

## FIGURE 1

ctccttggtcc aagtgtccaa ggtccccagc tcntaagtc aggaacaatc cangcaagac	60
gcgatctacc agaacctgac ccagcttaaa gctgcagtgg gtgagctctc agagaaatcc	120
aagctgcagg agatctacca ggagctgacc cagctgaagg ctgcagtggg tgagcttcca	180
gagaaatcna agcagcagga gatctaccag gagctgaccc ggctgaaggc tgcagtgggt	240
gagcttccag agaaatcnaa gctgcaggag atctaccagg agctgaccng gctgaaggct	300
gcagtgggtg agcttccaga gaaatctaag atgcaggaga tctaccagga gctgacncgg	360
ctgaaggctg cagtgggtga gctcccagag aaatctaagc agcaggagat ctaccaggag	420
ctgacccggc tgaaggctgc agtgggtgag ctaccagaga aatctaagca gcaggagatc	480
taccaggagc tgacccggct gaaggctgca gtgggtgagc ttccagataa atccaagcag	540
caggagatct accaggagct gaccagctg aaggctg	577

## FIGURE 2 (Page 1 of 4)

## Alignment Results

Alignment: Multi-way DNA alignment.

Parameters: Scoring matrix: Linear (Mismatch 2, OpenGap 4, ExtGap 1)

Number of sequences to align: 5

Pos	Sequence	Start	End	Length	Matches	%Matches
1	Chimp_DC-SIGN	1	1212	1212	1203	99
2	Pan troglodytes	1	1212	1212	1203	99
3	huDC-SIGN_CDS	1	1215	1215	1203	99
4	Macaca mulatta_CDS	1	1215	1215	1133	93
5	mu_DC-SIGN.txt	1	1450	1450	670	44

## FIGURE 2 (Page 2 of 4)

## Alignment Results

Alignment: Multi-way DNA alignment.

Parameters: Scoring matrix: Linear (Mismatch 2, OpenGap 4, ExtGap 1)

Number of sequences to align: 5

Settings: Similarity significance value cutoff: &gt;= 60%

## Summary of Percent Matches:

Sequence 1:	Chimp DC-SIGN	1 -	1212	( 1212 bps)	99%
Sequence 2:	Pan troglodytes	1 -	1212	( 1212 bps)	99%
Sequence 3:	huDC-SIGN CDS	1 -	1215	( 1215 bps)	99%
Sequence 4:	Macaca mulatta CDS	1 -	1215	( 1215 bps)	93%
Sequence 5:	mu_DC-SIGN.txt	1 -	1450	( 1450 bps)	44%

```

Chimp DC-SIG      1 -----
Pan troglody      1 -----
huDC-SIGN CD      1 -----
Macaca mulat      1 -----
mu_DC-SIGN.t      1 gggcactgagaagtggctgtgaaac-----

Chimp DC-SIG      36 -----
Pan troglody      36 -----
huDC-SIGN CD      36 -----
Macaca mulat      36 -----
mu_DC-SIGN.t      61 tgcgctcttggatgaggaactgctgacatccagccacaccaggcactccatcaaaagcctt

Chimp DC-SIG      69 -----
Pan troglody      69 -----
huDC-SIGN CD      69 -----
Macaca mulat      69 -----
mu_DC-SIGN.t      121 tggcttccaaacaaattctggattcagtagacacaggggtgctggtctccacagtcgaagt

Chimp DC-SIG      125 -----
Pan troglody      125 -----
huDC-SIGN CD      125 -----
Macaca mulat      125 -----
mu_DC-SIGN.t      181 ccgpttggcacttgcagggtatccagatgtttgttctgttctgctggttctcagctg

Chimp DC-SIG      171 -----
Pan troglody      171 -----
huDC-SIGN CD      171 -----
Macaca mulat      171 -----
mu_DC-SIGN.t      241 tgcagaggtcagcaaaacacacagtc-----tccgaagagaaaacatcagatgaatgt

Chimp DC-SIG      231 -----
Pan troglody      231 -----
huDC-SIGN CD      231 -----
Macaca mulat      231 -----
mu_DC-SIGN.t      295 tgcagaggtcagcaaaacacacagtc-----tccgaagagaaaacatcagatgaatgt

Chimp DC-SIG      291 -----
Pan troglody      291 -----
huDC-SIGN CD      291 -----
Macaca mulat      291 -----
mu_DC-SIGN.t      339 tgcagaggtcagcaaaacacacagtc-----tccgaagagaaaacatcagatgaatgt

Chimp DC-SIG      349 -----
Pan troglody      349 -----
huDC-SIGN CD      349 -----
Macaca mulat      349 -----
mu_DC-SIGN.t      392 tgcagaggtcagcaaaacacacagtc-----tccgaagagaaaacatcagatgaatgt

Chimp DC-SIG      397 -----
Pan troglody      397 -----
huDC-SIGN CD      397 -----
Macaca mulat      397 -----
mu_DC-SIGN.t      449 tgcagaggtcagcaaaacacacagtc-----tccgaagagaaaacatcagatgaatgt

```

Chimp DC-SIG 456 gctgaagggctgagcttgcagagaaatctaagatgcaggagatctaccagga  
Pan troglody 456 gctgaagggctgagcttgcagagaaatctaagatgcaggagatctaccagga  
huDC-SIGN CD 456 gctgaagggctgagcttgcagagaaatctaagatgcaggagatctaccagga  
Macaca mulat 456 gctgaagggctgagcttgcagagaaatctaagatgcaggagatctaccagga  
mu\_DC-SIGN.t 506 aagagagggctacacttggtggtggtcattgacat---gagcaaggag-tctacatggt

Chimp DC-SIG 516 gctgaagggctgagcttgcagagaaatctaagatgcaggagatctaccagga  
Pan troglody 516 gctgaagggctgagcttgcagagaaatctaagatgcaggagatctaccagga  
huDC-SIGN CD 516 gctgaagggctgagcttgcagagaaatctaagatgcaggagatctaccagga  
Macaca mulat 516 gctgaagggctgagcttgcagagaaatctaagatgcaggagatctaccagga  
mu\_DC-SIGN.t 561 atcggggtgagatggttcacctctgactctcagtttcagatgaagtattggagta-aaggagga

Chimp DC-SIG 576 c-taaca-----gagagctga-----cccggtggaaggctgcagtggg---  
Pan troglody 576 c-taaca-----gagagctga-----cccggtggaaggctgcagtggg---  
huDC-SIGN CD 576 c-taaca-----gagagctga-----cccggtggaaggctgcagtggg---  
Macaca mulat 576 c-taaca-----gagagctga-----cccggtggaaggctgcagtggg---  
mu\_DC-SIGN.t 620 cctgaagacactggagagaggagactgtgcagagtttagagatgacggctggaatgacacc

Chimp DC-SIG 612 ---[REDACTED]---  
Pan troglody 612 ---[REDACTED]---  
huDC-SIGN CD 612 ---[REDACTED]---  
Macaca mulat 612 ---[REDACTED]---  
mu\_DC-SIGN.t 680 aaatgtatgaagagagattttaggattctgcaaaagctttcaacttcctgacctagcaag

Chimp DC-SIG 665 tgaagggc-----tgcagtgggtgagcttccagagaaatctaagcagcaggagatct-  
Pan troglody 665 tgaagggc-----tgcagtgggtgagcttccagagaaatctaagcagcaggagatct-  
huDC-SIGN CD 665 tgaagggc-----tgcagtgggtgagcttccagagaaatctaagcagcaggagatct-  
Macaca mulat 665 tgaagggc-----tgcagtgggtgagcttccagagaaatctaagcagcaggagatct-  
mu\_DC-SIGN.t 740 tgatggccaactccctcgaccatcccaagtcscacaaacccctgccaatggcagaactt

Chimp DC-SIG 716 -accaggagctgagcagctgaaggctgcagtgggaagcctgtggaggggagggcctc-  
Pan troglody 716 -accaggagctgagcagctgaaggctgcagtgggaagcctgtggaggggagggcctc-  
huDC-SIGN CD 716 -accaggagctgagcagctgaaggctgcagtgggaagcctgtggaggggagggcctc-  
Macaca mulat 716 -accaggagctgagcagctgaaggctgcagtgggaagcctgtggaggggagggcctc-  
mu\_DC-SIGN.t 800 taccatagctatgccagttttactactgtctgacacattgataaccttgacaagat

Chimp DC-SIG 771 ctgggaatggacattcttccaaggaaactgttacttcatgtotaaetccagcggaaactg  
Pan troglody 771 ctgggaatggacattcttccaaggaaactgttacttcatgtotaaetccagcggaaactg  
huDC-SIGN CD 771 ctgggaatggacattcttccaaggaaactgttacttcatgtotaaetccagcggaaactg  
Macaca mulat 771 ctgggaatggacattcttccaaggaaactgttacttcatgtotaaetccagcggaaactg  
mu\_DC-SIGN.t 860 ggtatagactttatggggggtgctgctgt---ccctcagctgcctctg---agtcca

Chimp DC-SIG 831 gctgaagggctgagcttgcagagaaatctaagatgcaggagatctaccagga  
Pan troglody 831 gctgaagggctgagcttgcagagaaatctaagatgcaggagatctaccagga  
huDC-SIGN CD 831 gctgaagggctgagcttgcagagaaatctaagatgcaggagatctaccagga  
Macaca mulat 831 gctgaagggctgagcttgcagagaaatctaagatgcaggagatctaccagga  
mu\_DC-SIGN.t 914 gttttgtctctggaatcattaatgtatagctcctctgatgtctgcaggttctctttgggtta

Chimp DC-SIG 856 gaaatggggggcagcctcctcctcctcctcctcctcctcctcctcctcctcctc-  
Pan troglody 856 gaaatggggggcagcctcctcctcctcctcctcctcctcctcctcctcctcctc-  
huDC-SIGN CD 856 gaaatggggggcagcctcctcctcctcctcctcctcctcctcctcctcctcctc-  
Macaca mulat 856 gaaatggggggcagcctcctcctcctcctcctcctcctcctcctcctcctcctc-  
mu\_DC-SIGN.t 974 gtgggt

Chimp DC-SIG 900 gaaatggggggcagcctcctcctcctcctcctcctcctcctcctcctcctcctc-  
Pan troglody 900 gaaatggggggcagcctcctcctcctcctcctcctcctcctcctcctcctcctc-  
huDC-SIGN CD 900 gaaatggggggcagcctcctcctcctcctcctcctcctcctcctcctcctcctc-  
Macaca mulat 900 gaaatggggggcagcctcctcctcctcctcctcctcctcctcctcctcctcctc-  
mu\_DC-SIGN.t 1034 taaatgggttctcctcctcctcctcctcctcctcctcctcctcctcctcctcctcct

Chimp DC-SIG 942 gaaatggggggcagcctcctcctcctcctcctcctcctcctcctcctcctcctc-  
Pan troglody 942 gaaatggggggcagcctcctcctcctcctcctcctcctcctcctcctcctcctc-  
huDC-SIGN CD 942 gaaatggggggcagcctcctcctcctcctcctcctcctcctcctcctcctcctc-  
Macaca mulat 942 gaaatggggggcagcctcctcctcctcctcctcctcctcctcctcctcctcctc-  
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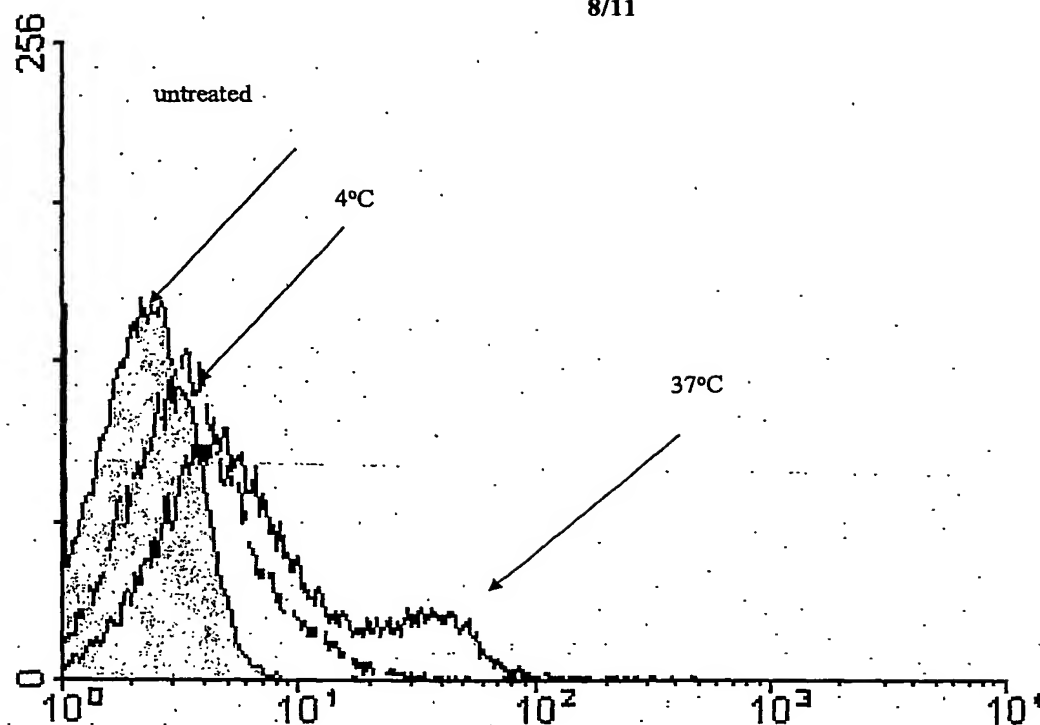
Chimp DC-SIG	1002	ctctgttgcg	cccaagcatt	caagcagttattggaaagag	aggaagga
Pan troglody	1002	ctctgttgcg	cccaagcatt	caagcagttattggaaagag	aggaagga
huDC-SIGN CD	1002	ctctgttgcg	cccaagcatt	caagcagttattggaaagag	aggaagga
Macaca mulat	1002	ctctgttgcg	cccaagcatt	caagcagttattggaaagaa	agggaga
mu_DC-SIGN.t	1151	cbtttttatgggac	cccttcccttgatttcaggagctc	cacctatagacta	aaagcacaga
Chimp DC-SIG	1041	gcccaacaa	cgttggggagggaagactgcgcggaattttagtg	-----	caatggcctgga
Pan troglody	1041	gcccaacaa	cgttggggagggaagactgcgcggaattttagtg	-----	caatggcctgga
huDC-SIGN CD	1041	gcccaacaa	cgttggggagggaagactgcgcggaattttagtg	-----	caatggcctgga
Macaca mulat	1041	gcccaacaa	cgttggggagggaagactgcgcggaattttagtg	-----	caatggcctgga
mu_DC-SIGN.t	1211	gagccaatttc	ctaactatttagtcattg	ataga	aaattttgtgttaatttctcgaacc
Chimp DC-SIG	1094	at	gacgga	aatgcaat	cttgcgaattct
Pan troglody	1094	at	gacgga	aatgcaat	cttgcgaattct
huDC-SIGN CD	1094	at	gacgga	aatgcaat	cttgcgaattct
Macaca mulat	1094	at	gacgga	aatgcaat	cttgcgaattct
mu_DC-SIGN.t	1271	tctctaccctc	gggtgggaatggtgagcctcaatgttataga	ctccga	aaatttttgg
Chimp DC-SIG	1124	ggatttgcga	-----	aaagtcgga	gcctgcctgcgaaggggaatgaa
Pan troglody	1124	ggatttgcga	-----	aaagtcgga	gcctgcctgcgaaggggaatgaa
huDC-SIGN CD	1124	ggatttgcga	-----	aaagtcgga	gcctgcctgcgaaggggaatgaa
Macaca mulat	1124	ggatttgcga	-----	aaagtcgga	gcctgcctgcgaaggggaatgaa
mu_DC-SIGN.t	1331	ggatttgcga	-----	aaagtcgga	gcctgcctgcgaaggggaatgaa
Chimp DC-SIG	1166	aaaggttgcga	-----	aaagtcgga	gcctgcctgcgaaggggaatgaa
Pan troglody	1166	aaaggttgcga	-----	aaagtcgga	gcctgcctgcgaaggggaatgaa
huDC-SIGN CD	1166	aaaggttgcga	-----	aaagtcgga	gcctgcctgcgaaggggaatgaa
Macaca mulat	1166	aaaggttgcga	-----	aaagtcgga	gcctgcctgcgaaggggaatgaa
mu DC-SIGN.t	1391	ataagtataaata	aaccatttttgatttttc	catctcccaaaaaaaaaaaaaaaaaa	aaaaa

FIGURE 3 (PAGE 1 OF 2)

putative boDC-SIGN	-----LLV----
Chimp_DC-SIGN	MSDSKEPRLOQLGLLEEEQLRGLFRQNRGYKSLAGCLGHGPLVLQLLSFTLLAGLLV----
huDC-SIGN_CDS	MSDSKEPRLOQLGLLEEEQLRGLFRQNRGYKSLAGCLGHGPLVLQLLSFTLLAGLLV----
Macaca mulatta_CDS	MSDSKEPRLOQLDLLEEEQLGGVGFRTQTRGYKSLAGCLGHGPLVLQLLSFTLLAGLLV----
putative boDC-SIGN	-----QVSKVPSS*SQE--QS*QDAIYQNL-----
Chimp_DC-SIGN	-----QVSKVPSSISQE--ESRQDVIYQNL-----
huDC-SIGN_CDS	-----QVSKVPSSISQE--QSRQDAIYQNL-----
Macaca mulatta_CDS	-----QVSKVPSSLSQG--QSKQDAIYQNL-----
putative boDC-SIGN	-----TQLKAAVG-----ELSEKSKLQEIYQE-----LTQLKAAVGELPEK*--
Chimp_DC-SIGN	-----TQLKAAVG-----ELSEKSKLQEIYQE-----LTQLKAAVGELPEKS--
huDC-SIGN_CDS	-----TQLKAAVG-----ELSEKSKLQEIYQE-----LTQLKAAVGELPEKS--
Macaca mulatta_CDS	-----TQLKVAVS-----ELSEKSKQQEIYQE-----LTRLKAAVDELPEKS--
putative boDC-SIGN	-----KQEIYQEL-----KQEIYQEL
Chimp_DC-SIGN	-----KQEIYQEL-----KQEIYQEL
huDC-SIGN_CDS	-----KLQEIYQEL-----KLQEIYQEL
Macaca mulatta_CDS	-----KQEIYEEL-----KQEIYEEL
putative boDC-SIGN	-----EY-QELT*LKAAVGELP-----
Chimp_DC-SIGN	-----EY-QELTRLKAAVGELP-----
huDC-SIGN_CDS	-----EY-QELTWLKAAVGELP-----
Macaca mulatta_CDS	-----EY-QELTWLKAAVGELP-----
putative boDC-SIGN	-----EKSKMQEIYQEL*R-LKAAVGE*P-----
Chimp_DC-SIGN	-----EKSKMQEIYQELTR-LKAAVGELP-----
huDC-SIGN_CDS	-----EKSKMQEIYQELTR-LKAAVGELP-----
Macaca mulatta_CDS	-----EKSKMQEIYQELSR-LKAAVGDLDP-----

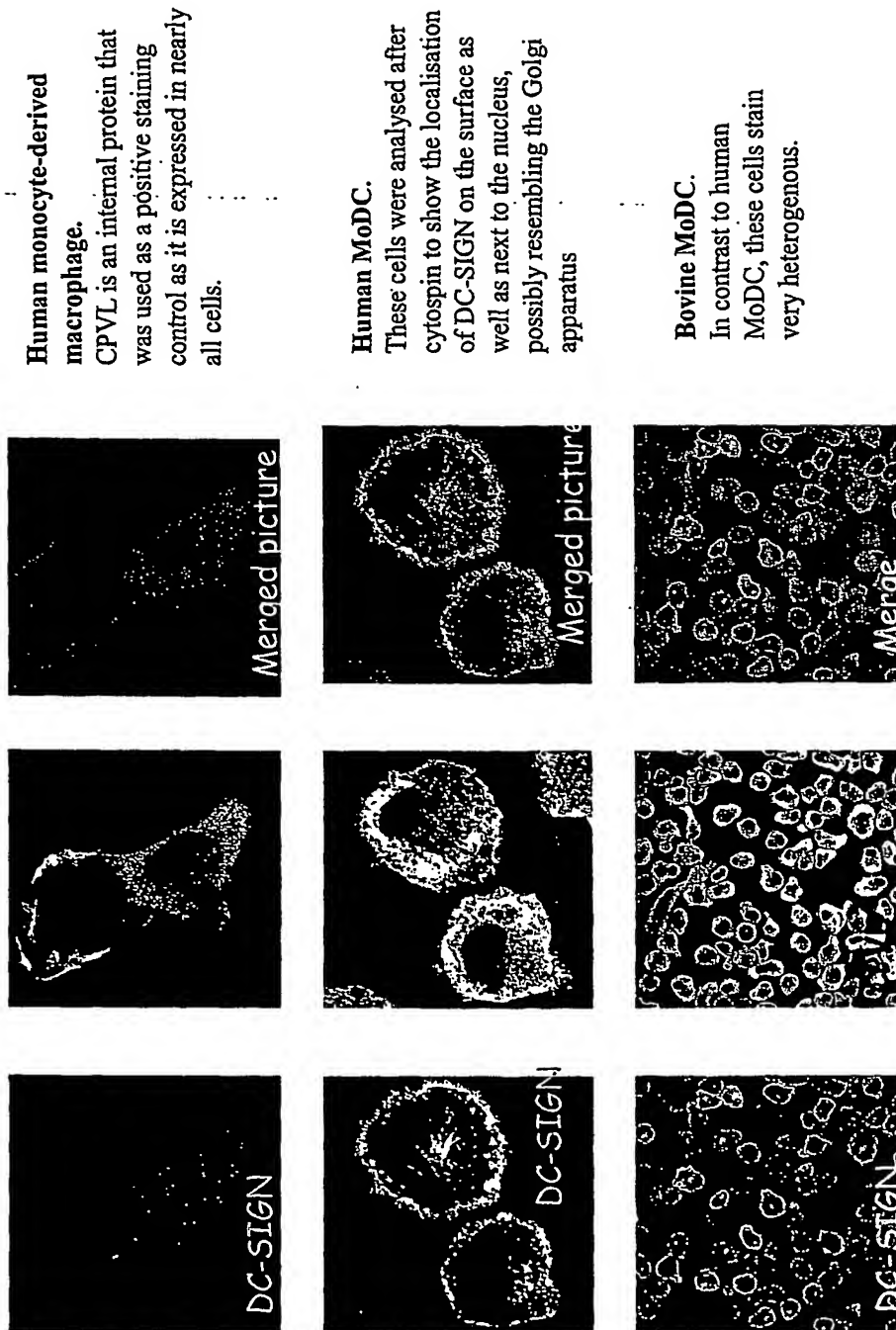
FIGURE 3 (PAGE 2 OF 2)

putative boDC-SIGN	EKSKQOE-----IYQELTR-----
Chimp_DC-SIGN	EKSKQOE-----IYQELTR-----
huDC-SIGN_CDS	EKSKQOE-----IYQELTR-----
Macaca mulatta_CDS	EKSKQOE-----IYQELTR-----
putative boDC-SIGN	LKAAVGE*PEKS-----KQEIYQELT*LKAAVGELP***--KQOE-----
Chimp_DC-SIGN	LKAAVGELPEKS-----KQEIYQELTRLKAAVGELP-----EKSKQOE-----
huDC-SIGN_CDS	LKAAVGELPEKS-----KQEIYQELTRLKAAVGELP-----EKSKQOE-----
Macaca mulatta_CDS	LKAAVGDLPEKS-----KQEIYQKLTLKAAVDGLP-----DRSKQOE-----
putative boDC-SIGN	-----IYQELTQLKA-----
Chimp_DC-SIGN	-----IYQELTQLKAAVERLCRRCPW-----
huDC-SIGN_CDS	-----IYQELTQLKAAVERLCHPCPW-----
Macaca mulatta_CDS	-----IYELIQLKAAVERLCHPCPW-----
putative boDC-SIGN	-----
Chimp_DC-SIGN	EWTFQNCYFMSNSQRNWHDSITACEVGAQLVVIKSAEEQNFLQLQSSRSNRFTWMGL
huDC-SIGN_CDS	EWTFQNCYFMSNSQRNWHDSITACEVGAQLVVIKSAEEQNFLQLQSSRSNRFTWMGL
Macaca mulatta_CDS	EWTFQNCYFMSNSQRNWHDSITACEVGAQLVVIKSAEEQNFLQLQSSRSNRFTWMGL
putative boDC-SIGN	-----
Chimp_DC-SIGN	SDLNEEGTWQVVDGSPLLPSFNQYWNRGEPNNVGEEDCAEFSGNGWDDKCNLAKFWICK
huDC-SIGN_CDS	SDLNQEGTWQVVDGSPLLPSFKQYWNRGEPNNVGEEDCAEFSGNGWDDKCNLAKFWICK
Macaca mulatta_CDS	SDLNHEGTWQVVDGSPLLPSFKQYWNKGEPNNIGEEDCAEFSGNGWDDKCNLAKFWICK
putative boDC-SIGN	-----
Chimp_DC-SIGN	KSAASCSRDEEQFLSPAPATPNPPPA-
huDC-SIGN_CDS	KSAASCSRDEEQFLSPAPATPNPPPA*
Macaca mulatta_CDS	KSAASCSGDEERLLSPAPTTPNPPPA*



**Fig. 4: Binding of HIV gp120-FITC to bovine DC.** Cells were either left untreated or incubated at 4C or 37C with gp120-FITC for 60min and analysed by flow cytometry.





**Figure 5: Staining pattern of human monocyte-derived macrophages, human monocyte-derived dendritic cells and bovine monocyte-derived dendritic cells with a polyclonal antibody raised against the human DC-SIGN molecule.**

## FIGURE 6

gagatgtatg aacacaagga gccagatgac tctgaggagg agacatttgg gggccagaga	60
ctggctgaga gacaccctcg accactacac agtttgagga gcttgtcaga gtgtctgacc	120
tggggccctc tgettctcct gctgctcctc ttcgtctcac tgggcttctt cacgctccag	180
ctgaccactc tggttcaagt ttccaggatc cagtgtctgc agagagattc gggagaccgt	240
gagaacaaca gcctggataa gtggtggac accaggttcc ggagtctgac tgaagttgca	300
gagaagcaga tgcaatcaaa cctggagaag atcctacagc gcctgacccg gatgaatgcc	360
accctggctg gcctgtgcca tccttgctct cagaattggg agtttttcga tggagctgc	420
tacttcttct cctggaccca gactgactgg agatctgccg tctctgcctg tctgcttatt	480
ggggcccacc tagttatcat cgagagtact gaggaggaga aattcctgaa cttttggtat	540
cccagaaata ataaaccac ctggatcggc ctcagtgacc accacagtga gggttcctgg	600
cggtgggtgg atgacagtcc tgtccaactc agcttctgga aaaaagggga gcccaacaac	660
cacggagatg aggactgtgt ggaactgcac aacgatggct ggaatgatgg cagatgtgtt	720
acagaaaacc cctggatctg tgagaagccc tcg	753

05 Jul 2004

Alignment Results

Alignment: Global Protein alignment against reference molecule  
Parameters: Scoring matrix: BLOSUM 62

Reference molecule: NM 021155 AA, Region 1-407  
Number of sequences to align: 4  
Settings: Similarity significance value cutoff: >= 50%

Summary of Percent Matches:

Reference:	NM 021155 AA	1 -	407	(	407 aa)	--
Sequence 2:	muDC-SIGN AA	1 -	238	(	238 aa)	32%
Sequence 3:	boDC-SIGN variant 1 AA	1 -	251	(	251 aa)	26%
Sequence 4:	boDC-SIGN variant 2 AA	1 -	192	(	192 aa)	43%

NM 021155 AA	1	wgmsdskeprlqqlglleeeql	-----	rglfrqtrgyksagcglghg	--	plvlqlleft	-----	llaqllvqvskvpssisqeqs
muDC-SIGN AA	1	---msdskemgrqlrpldeelltssthrhsikgfgqtnsgfssftgclvhsqvpalalqvlflavcsvllvvlkvkykipss	-----	-----	-----	-----	-----	-----
boDC-SIGN va	1	---emyehkepdseeetfgqrl	-----	aerhprlshrsisecltwg	--	pllllllfv	-----	slgfftllqlt
boDC-SIGN va	1	-----	-----	-----	-----	-----	-----	llvqvskvpss?sqeqs
NM 021155 AA	76	rqdaiyqnlqlkaavgelsekklqeiylqeltqlkaavgelpeksklqeiylqeltlrlkaavgelpeksklqeiylqeltwlkaavgelpe	-----	-----	-----	-----	-----	-----
muDC-SIGN AA	82	-----	-----	-----	-----	-----	-----	-----
boDC-SIGN va	63	-----	-----	tlvqvsrizqlqrd	-----	sgdr-ennsldk	-----	wld
boDC-SIGN va	18	?qdaiyqnlqlkaavgelsekklqeiylqeltqlkaavgelpeksklqeiylqeltlrlkaavgelpeksklqeiylqeltlrlkaavgelpe	-----	-----	-----	-----	-----	-----
NM 021155 AA	166	kskmqeiylqeltlrlkaavgelpekskqgeiyqeltlrlkaavgelpekskqgeiyqeltlrlkaavgelpekskqgeiyqeltqlkaav	-----	-----	-----	-----	-----	-----
muDC-SIGN AA	82	-----	-----	-----	-----	-----	-----	-----
boDC-SIGN va	91	-----	-----	frslt	-----	evaeqgmq	-----	qeen
boDC-SIGN va	108	kskmqeiylqeltlrlkaavge?pekskqgeiyqeltlrlkaavge?pekskqgeiyqeltlrlkaavge?pekskqgeiyqeltqlka	-----	-----	-----	-----	-----	-----
NM 021155 AA	253	erlchpcpwewtffqgncyfmsnsqgrnwhdsitackevgaqlvyikaeeqnfqlqssrsnrftwmglndlnqegtwwvqgspllpsf	-----	-----	-----	-----	-----	-----
muDC-SIGN AA	102	drlcrscpwwthfqqscyfssvaqskwndsatachnvgaqlvviksdeeqnflq-qtskkrgytwmgldmskestwywvqgsplltsf	-----	-----	-----	-----	-----	-----
boDC-SIGN va	123	aglhpcpqnweffdgscyfsswtqsdwsavsaclligahlviiesteekflnfwyprnnkptwiglsdhhssegswrwwdpsvqlsf	-----	-----	-----	-----	-----	-----
boDC-SIGN va	193	-----	-----	-----	-----	-----	-----	-----
NM 021155 AA	343	kqymnrgcpnnvgeedcaefsgngwnddkcnlakfwlckksaascrsdeeqflspapatpnpppa	-----	-----	-----	-----	-----	-----
muDC-SIGN AA	191	mkyskgepnnglgeedcaefrdgdgndtkctnkkfwlckklstsc	-----	-----	-----	-----	-----	psk
boDC-SIGN va	213	---wkkgpepnghgdedcvelhndgwndgrovtenpwicckps	-----	-----	-----	-----	-----	-----
boDC-SIGN va	193	-----	-----	-----	-----	-----	-----	-----

FIGURE 7